Amendments to the Claims

1. (currently amended) A method for estimating a channel impulse response in an ultra wide bandwidth (UWB) system comprising the steps of:

transmitting and receiving in parallel via a channel a plurality of training sequences, each training sequence being different, each training sequence being modulated at a chip rate, and each training sequence consisting of ultra wide bandwith radio pulses;

sampling each training sequence in parallel with multiple correlators at sampling rate substantially slower than the chip rate to obtain a plurality of samples for each training sequence, in which the samples span a time interval corresponding to an impulse response of the channel; and

estimating the impulse response of the channel over ~~a the~~ the time interval corresponding to the impulse response of the channel from the plurality of samples of the plurality of training sequences at a resolution substantially equal to the chip rate.

2. (original) The method of claim 1, in which each training sequence is passed through *n* correlators to generate *n* samples for each correlator.

3. (original) The method of claim 1, in which the sampling rate is at least ten times slower than the chip rate.

4. (original) The method of claim 1, in which the sampling rate is equal to a symbol rate.

5. (previously presented) The method of claim 1 further comprising:

estimating equalizer coefficients from an equalizer training sequence consisting of radio pulses.

6. (previously presented) The method of claim 1 further comprising:

estimating weights for the corresponding correlators to acquire most of the available energy of a data signal received via the estimated channel, in which the data signal consists of the ultra wide bandwith radio pulses.

7. (previously presented) The method of claim 1, in which a first subset of the samples are used for a rough estimate, and a second subset of the samples are used for an accurate estimate based on the rough estimate.

8. (original) The method of claim 1, in which the estimate is based on a previous estimate of the channel impulse response.

9. (previously presented) The method of claim 1, in which each correlator generates k samples, where k is greater than one.

10 (previously presented) The method of claim 1, in which the chip rate is chip rate on the order of 10 GHz.

11. (previously presented) The method of claim 7, in which the second subset of samples are obtained from training sequences received after obtaining the first subset of samples.